IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

XR COMMUNICATIONS, LLC, dba VIVATO TECHNOLOGIES *Plaintiff*, v. AT&T SERVICES INC., AT&T MOBILITY LLC, and AT&T CORP. *Defendant*, NOKIA OF AMERICA CORPORATION, ERICSSON INC. *Intervenors*.	Case No. 2:23-cv-00202-JRG-RSP (Lead Case) JURY TRIAL DEMANDED

PLAINTIFF XR COMMUNICATIONS, LLC'S CORRECTED PARTIAL OBJECTION TO CLAIM CONSTRUCTION ORDER

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Plaintiff XR Communications, LLC dba Vivato Technologies ("Plaintiff" or "Vivato") respectfully objects in part to the Claim Construction Order (ECF 99) as set forth below. Vivato does not object to the Order's constructions of "pre-equalization parameter" ('369 patent, cl. 1, 13, 21, 32, 33, 41), "wireless input/output (I/O) unit" ('939 patent, cl. 15, 30), "n multiple-input multiple-output transceivers (MIMO)" ('511 patent, cl. 1, 10), "MIMO transmitter . . . " / "MIMO receiver . . ." ('511 patent, cl. 1, 10, 20), or "transceiver" ('235 patent, cl. 1, 15, 18, 19).

I. U.S. PATENT NO. 7,177,369 ("'369 PATENT")

A. "substantially reciprocal to" ('369 patent, claim 12)

The Court found the intrinsic record does not provide reasonable certainty on when the forward transmission path is "substantially reciprocal" to the reverse transmission path. Vivato objects. "Reciprocity" is a well-known property to describe paths in a wireless channel such as in Time Division Duplex (TDD) systems. Ex. 1 ('369 Patent), 7:21-34. The '369 patent specification describes "substantially reciprocal" as reciprocal for "a given moment in time between a base station device and a consumer premise equipment device." Ex. 1 ('369 Patent), 2:13-16. The '369 patent also says that reciprocity is an *assumption* about the channel that POSITAs make about Time Division Duplex (TDD) systems *for certain durations of time*. Ex. 1 ('369 Patent), 10:61-11:5 ("[i]f TDD is used, then the channel can be assumed to be reciprocal for durations (coherence time) of approximately 10 ms."). The Court found that this is not an objective boundary, but the law does not require mathematical precision. This provides enough certainty that claim 12 is directed to a TDD system. "Claim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014).

II. U.S. PATENT NO. 8,289,939 ("'939 PATENT")

A. "signal transmission/reception coordination logic" ('939 patent, claims 15, 30)

Vivato objects to the Order finding this is means-plus-function; indeed, "[t]he Western District of Texas, however, concluded this is not a means-plus-function term." ECF 99 at 22. The Order agrees the intrinsic record says to implement the logic in the baseband processing layer of a processing chip in a wireless routing device, but it holds that this does not indicate what the logic is and what structure it has. ECF 99 at 23-24. But the intrinsic record establishes a baseband signal processor as structure for the logic. And if any further information is needed, the claims and specification provide the necessary context, defining the inputs, outputs, and structural connections of the logic. The '939 patent claims a "***signal***" logic that monitors access points for received ***signals*** and restrains ***signal*** transmission, which illustrates the inputs and outputs to a baseband signal processor chip or equivalent. The claims recite the inputs to the logic ("monitoring the plurality of access points for *received signals*") and the output ("restrain[ing]" another access point from transmitting *signal*). *See* '939 patent, cl. 15, 30; *see id.* 6:1-15. Similarly, Figure 4 depicts signal transmission/reception coordination logic 404 to "monitor the multiple access points 402(1…N) to ascertain when a signal is being received" and to "restrain" signal transmissions on the access points—just as claimed. '939 patent, 5:65-6:15, 6:16-53. The '939 patent thus couples "signal transmission/reception coordination logic" with "language describing its operation," an even narrower and clearer structure than "code" found to be structural in the *Dyfan* case, or "circuit" found structural in the *Apex* case. *Dyfan LLC v. Target Corp.*, 28 F.4th 1360, 1367 (Fed. Cir. 2022) (reversing § 112 ¶6 for terms "code" and "application" which could be implemented using "off-the-shelf" software); *Apex Inc. v. Raritan Comput., Inc.,* 325 F.3d 1364, 1373 (Fed. Cir. 2003) ("circuit" connotes structure and is not §112(6)) (cited with approval in *Dyfan*).

In reaching step two, the Central District of California found corresponding structure is "signal transmission/coordination logic 404" and "MAC coordinator logic 606" having

characteristics and configuration set forth in the specification. Ex. 5 (CDCA Order) at 8-10. Those corresponding structures are clearly linked to the claimed functions. *Id.* Vivato believes that the Central District of California's construction is required by the law mandating that a means-plus-function term cover *all* corresponding structure linked to the claimed functions. Here, Vivato objects to the Court's Order insofar as the Order finds that the Figures 3-6 and accompanying text fail to disclose corresponding structure clearly linked to the recited functions. Vivato submits that these embodiments are clearly linked to the recited functions and disclose corresponding structure, including "signal transmission/reception coordination logic 404" which is a term that a person of ordinary skill in the art understands as a structure, especially in light of the text accompanying Figures 3-6 showing the processing circuitry in the access station as signal logic 404 structure within the wireless input/output unit structure in Figure 4, or as MAC logic 606 in Figure 6. In addition, Vivato submits that Figure 5 embodiment and the accompanying text which closely mirrors the claim language together disclose sufficient structure for the logic by reciting the inputs, outputs, structural connections, and operation of the logic. '939 patent, 5:65-6:54.

Separately, the Court's Order finds that at least the Figure 7 and 12 embodiments to disclose an algorithm for performing the recited function. ECF 99 at 25-26 ("(1) accepting multiple receive indicators from multiple BB units; (2) determining whether an affirmative signal reception indicator from a BB unit is detected in the indicators; (3) providing instructions to the MACs that are associated with any BB units for which an affirmative reception indicator is detected to restrain signal transmission."); *see* '939 Patent, 17:54-64. The Order finds that the corresponding structure is a general purpose processor programmed to implement these algorithmic steps, and equivalents thereof. An equivalent algorithm is also disclosed in the context of the Figure 13 embodiment, which recites the following corresponding structure/algorithm:

> Signal transmission/reception coordination logic 404 applies one or more coordination functions to the receive information accepted from RF parts 610(1, 2 . . . N). The resulting combined receive information is forwarded to BB units 608(1, 2 . . . K). Based on the combined receive information, respective BB units 608(1, 2 . . . K) provide MAC primitives to associated respective MACs 604(1, 2, , , K). The MAC primitives can instruct the MACs 604(1, 2 ... K) with regard to whether a signal is being received and/or constructively received by a corresponding RF part 610 and emanation apparatus 1204 pair.
>
> '939 patent, 18:45-55.

B. "restrain . . . responsive to the ascertaining . . ." ('939 patent claims 15, 30)

Vivato agrees with the "plain and ordinary meaning" construction and agrees that the "ascertaining" and "restraining" steps do not need to be contemporaneous. ECF 99 at 31. Defendants have argued that the "ascertaining" and "restraining" steps need to "happen at the same time." ECF 99 at 28. The Court correctly rejected that position. ECF 99 at 31.

Separately, the Court held that the "'restraining' must happen in response to the signal *being received*, and not what an access point is *expecting* to receive in the future." ECF 99 at 31. The Court characterized Vivato's position as in tension with the present tense "is receiving" language of the claims. However, Vivato maintains that the claim language at issue does not limit *how* an access point ascertains that a signal is being received. The specification explains that one embodiment of the claimed "restraining" involves ascertaining that the access point is receiving a signal because the access point is expecting an immediate response, and restraining transmission from another access point to avoid interference with the signal that the system knows the first access point is receiving. '939 Patent, 17:18-32. The Order suggests that Claim 15 is inconsistent with this because "Claim 15 requires the 'second signal' to be 'ongoing on a second channel,' and its final limitation requires the restraining to prevent degradation to the first and second signals, suggesting those signals are still being transmitted when the 'restraining' happens. '939 Patent at 20:45–47." But Claim 30 recites no such limitations, and the doctrine of claim differentiation

forecloses importing into Claim 30 the additional limitations appearing only in Claim 15. Beyond claim 15, the Order also points to the specification's description of a "signal" as a "e.g. packet" at col. 1:30. But the term "signal" carries its full plain and ordinary meaning, and the specification does not define "signal" as exclusively a "packet." *See* '939 Patent 4:20-36 (identifying "signals (e.g., wireless communication(s) 106 (of FIG. 1))"), 9:46-59 (identifying "the receive indicators may comprise indications of signal reception based on energy signals, cross-correlation signals, data signals, other transmit and/or control signals, some combination thereof, and so forth."), 13:4-9 (describing a "large interferer emanating an appropriate signal for a sufficiently long duration"). It does say that the *regularity* or *frequency* of *receptions* can be used as one way to ascertain when an access point is receiving a signal, such as a signal that is recurring. '939 Patent, 13:34-64.

C. "The access point" (claims 20-21)

Vivato objects; "the access point" refers to "the first access point" and is not indefinite.

III. U.S. PATENT NO. 8,737,511 ("'511 PATENT")

A. "2nd Generation Partnership Project (3GPP) Long Term Evolution (LTE), 3GPP LTE-Advanced, 3GPP LTE-TDD, 3GPP LTE-FDD" ('511 patent, claims 2, 11)

Vivato objects to the insertion of "that existed at the time of the invention" as it adds unnecessary confusion. Interpreting the claim to have the meaning it had at the time of filing does not merit an "at the time of the invention" construction here, because the meaning of these terms at the time of filing was a reference to body of 3GPP standards known to be updated over time. The Court should hold that claims 2 and 11 can be infringed by a 3GPP standard that existed at the time of the invention even if that standard has been updated over time. '511 Patent at 3:30-47.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the counsel of record who are deemed to have consented to electronic service are being served on November 29, 2024, with a copy of this document via the Court's ECF system.

/s/ Reza Mirzaie
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